

IN THE CLAIMS:

Kindly replace the claims with the following:

1. (Currently amended) A method of transcoding a primary encoded signal (S1) comprising a sequence of pictures, into a secondary encoded signal (S2), said method of transcoding comprising at least the steps of:

decoding a current picture of the primary encoded signal, said decoding step comprising a dequantizing sub-step (12) for producing a first transformed signal (R1),

encoding, following the decoding step, for obtaining the secondary encoded signal, said encoding step comprising a quantizing sub-step (13), wherein said method of transcoding further comprises a filtering step between the dequantizing sub-step and the quantizing sub-step, said filtering step using a recursive filter wherein the recursive filtering step is intended to use a recursive filter such as: $Rf[i]=(1-.alpha.[i])$ ($R1[i]+Rmc[i]$), where $Rf[i]$, $R1[i]$ and $Rmc[i]$ are transformed coefficients comprised in the transformed signals (Rf,R1,Rmc) and $.alpha.[i]$ is a filter coefficient comprised between 0 and 1 [.]; and

predicting a transformed motion-compensated signal from a transformed encoding error derived from the encoding step, said prediction step being situated between the encoding and decoding steps, wherein the recursive filtering step is for receiving the transformed motion-compensated signal and the first transformed signal and for delivering a filtered transformed signal to the quantizing sub-step.

2. (Canceled)

3. (Canceled)

4. (Previously presented) A method of transcoding a primary encoded signal comprising a sequence of pictures, into a secondary encoded signal, said method of transcoding comprising at least the steps of:

decoding a current picture of the primary encoded signal, said decoding step comprising a dequantizing sub-step for producing a first transformed signal,

encoding, following the decoding step, for obtaining the secondary encoded signal, said encoding step comprising a quantizing sub-step, wherein said method of transcoding further comprises a filtering step between the dequantizing sub-step and the quantizing sub-step; and

predicting a transformed motion-compensated signal from a transformed encoding error derived from the encoding step, said prediction step being situated between the encoding and decoding steps, wherein the filtering step is a spatial filtering step for receiving the first transformed signal and for producing a filtered transformed signal, said filtered transformed signal and the transformed motion-compensated signal being delivered to the quantizing sub-step.

5. (Previously presented) A method of transcoding a primary encoded signal comprising a sequence of pictures, into a secondary encoded signal, said method of transcoding comprising at least the steps of:

decoding a current picture of the primary encoded signal, said decoding step comprising a dequantizing sub-step for producing a first transformed signal,

encoding, following the decoding step, for obtaining the secondary encoded signal, said encoding step comprising a quantizing sub-step, wherein said method of transcoding further comprises a filtering step between the dequantizing sub-step and the quantizing sub-step; and

predicting a transformed motion-compensated signal from a transformed encoding error derived from the encoding step, said prediction step being situated between the encoding and decoding steps, characterized in that the filtering step is a spatial filtering step for receiving the transformed motion-compensated signal and the first transformed signal and for delivering a filtered transformed signal to the quantizing sub-step (13), the encoding step further comprising an inverse filtering sub-step.

6. (Previously presented) A method of transcoding a primary encoded signal comprising a sequence of pictures, into a secondary encoded signal, said method of transcoding comprising at least the steps of:

decoding a current picture of the primary encoded signal, said decoding step comprising a dequantizing sub-step for producing a first transformed signal,

encoding, following the decoding step, for obtaining the secondary encoded signal, said encoding step comprising a quantizing sub-step, wherein said method of transcoding further comprises a filtering step between the dequantizing sub-step and the quantizing sub-step; and

predicting a transformed motion-compensated signal from a transformed encoding error derived from the encoding step, said prediction step being situated between the encoding and decoding steps, wherein the filtering step is a spatial filtering step for receiving the transformed motion-compensated signal and the first transformed signal and for delivering a filtered transformed signal to the quantizing sub-step, said spatial filtering step being only applied to intra-coded macroblocks contained in the current picture.

7. (Original) A method of transcoding as claimed in claim 6, characterized in that it further comprises a detection step for giving a label to a current macroblock, the spatial filtering step being adapted to apply a filter to the current macroblock as a function of said label.

8. (Currently amended) A device for transcoding a primary encoded signal comprising a sequence of pictures, into a secondary encoded signal, said device comprising at least: a decoding unit for decoding a current picture of the primary encoded signal, said decoding unit comprising a dequantizing circuit for producing a first transformed signal, an encoding unit for obtaining the secondary encoded signal, said encoding unit comprising a quantizing circuit, characterized in that said transcoding device further comprises a recursive filter circuit between the dequantizing circuit and the quantizing circuit [[.]]wherein the recursive filtering unit is intended to use a recursive filter such as: $Rff[i]=(1-\alpha[i])(R1[i]+Rmc[i])$, where $Rff[i]$, $R1[i]$ and $Rmc[i]$ are transformed coefficients comprised in the transformed signals ($Rf, R1, Rmc$) and $\alpha[i]$ is a filter coefficient comprised between 0 and 1; and
a prediction unit for predicting a transformed motion-compensated signal from a transformed encoding error derived from the encoding unit, said prediction unit being situated between the encoding unit and the decoding unit, wherein the recursive filter circuit is for receiving the transformed motion-compensated signal and the first transformed signal and for delivering a filtered transformed signal to the quantizing circuit.

9. (Cancelled)

10. (Previously presented) A device for transcoding a primary encoded signal comprising a sequence of pictures, into a secondary encoded signal, said device comprising at least: a decoding unit for decoding a current picture of the primary encoded signal, said decoding unit comprising a dequantizing circuit for producing a first transformed signal, an encoding unit for obtaining the secondary encoded signal, said encoding unit comprising a quantizing circuit, said transcoding device further comprising:

a filter circuit between the dequantizing circuit and the quantizing circuit; and
a prediction unit for predicting a transformed motion-compensated signal from a transformed encoding error derived from the encoding unit, said prediction unit being situated between the encoding unit and the decoding unit, wherein the filter circuit is a spatial filter circuit for receiving the first transformed signal and for producing a filtered transformed signal, said filtered transformed signal and the transformed motion-compensated signal being delivered to the quantizing circuit.

11. (Previously presented) A device for transcoding a primary encoded signal comprising a sequence of pictures, into a secondary encoded signal, said device comprising at least: a decoding unit for decoding a current picture of the primary encoded signal, said decoding unit comprising a dequantizing circuit for producing a first transformed signal, an encoding unit for obtaining the secondary encoded signal, said encoding unit comprising a quantizing circuit, wherein said transcoding device further comprises:

a filter circuit between the dequantizing circuit and the quantizing circuit
a prediction unit for predicting a transformed motion-compensated signal from a transformed encoding error derived from the encoding unit, said prediction unit being situated between the encoding unit and the decoding unit, wherein the filter circuit is a

spatial filter circuit for receiving the transformed motion-compensated signal and the first transformed signal and for delivering a filtered transformed signal to the quantizing circuit, the encoding unit further comprising an inverse filter circuit.

12. (Previously presented) A device for transcoding a primary encoded signal (S1) comprising a sequence of pictures, into a secondary encoded signal (S2), said device comprising at least: a decoding unit for decoding a current picture of the primary encoded signal, said decoding unit comprising a dequantizing circuit (12) for producing a first transformed signal (R1), an encoding unit for obtaining the secondary encoded signal, said encoding unit comprising a quantizing circuit (13), wherein said transcoding device further comprises a filter circuit between the dequantizing circuit and the quantizing circuit

a prediction unit for predicting a transformed motion-compensated signal from a transformed encoding error derived from the encoding unit, said prediction unit being situated between the encoding and decoding units, wherein the filter circuit is a spatial filter circuit for receiving the transformed motion-compensated signal and the first transformed signal and for delivering a filtered transformed signal to the quantizing circuit, said spatial filter circuit being only applied to intra-coded macroblocks contained in the current picture.

13. (Original) A transcoding device as claimed in claim 12, characterized in that it further comprises a detection circuit for giving a label to a current macroblock, the spatial filter circuit being adapted to apply a filter to the current macroblock as a function of said label.

14. (Original) A computer program product for a digital video recorder, which computer program product comprises a set of instructions, which, when loaded into said digital video recorder, causes the digital video recorder to carry out the method as claimed in claim 1.

15. (Original) A computer program product for a set-top-box, which computer program product comprises a set of instructions, which, when loaded into said set-top-box, causes the set-top-box to carry out the method as claimed in claim 1.